

## ABSTRACT OF THE DISCLOSURE

The present invention describes a process for preparing cephradine, said process comprising reacting 7-aminodesacetoxy cephalosporanic acid (7-ADCA) with D-dihydrophenylglycine in activated form (DHa) in the presence of an enzyme in a reaction mixture to form cephradine, resulting in a conversion of 7-ADCA into cephradine of at least 70 %, wherein the concentration D-dihydrophenylglycine (DH) in the reaction mixture is below 2 wt.%, wherein the conversion of 7-ADCA into cephradine  $= (n_{\text{CEF}} / n_{7\text{-ADCA}}) * 100\%$ , wherein  $n_{\text{CEF}}$ =quantity of cephradine formed (in mole); and  $n_{7\text{-ADCA}}$  =total quantity of 7-ADCA added to reaction mixture (in mole). The invention also describes a process for the preparation of cephradine hydrate characterised in that the process comprises: - reacting 7-amino acid desacetoxy cephalosporanic acid (7-ADCA) with DHa in the presence of an enzyme in a reaction mixture to form cephradine; - preparing an aqueous solution comprising at least part of the cephradine; and crystallising the cephradine from said aqueous solution. The invention further describes cephradine hydrate obtainable by a process according to invention. The invention also describes cephradine hydrate with an absorbance at 450 nm of below 0.050.